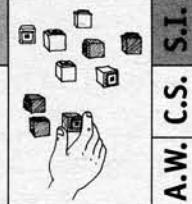


Counting Objects

Child's Name: _____ Date: _____

Concept 1: Counting Objects

Student Interview



What You Need:
32 Counters

Goal:
To determine if the child can count and keep track of an unorganized pile of up to 32 counters and can make a pile of up to 18 counters.

Procedure:
The child estimates, then counts. You will need to pay attention to several things at once. Notice any errors in the rote counting sequence and how the child counts and keeps track.

Task 1: Counting a Pile of Objects

Present the student with a pile of 32 counters and ask the questions below. If the child has difficulty, choose another number.

Circle the number presented.	32	21 12 7	12 7
Ask: "How many do you think there might be?"	(Record Estimate)	(Record Estimate)	(Record Estimate)
Ask: "Would you check and see?"	Lines Up Looks Points Moves	Lines Up Looks Points Moves	Lines Up Looks Points Moves
Notice how the child counts.	(Circle One & Record Rote Counting Errors)	(Circle One & Record Rote Counting Errors)	(Circle One & Record Rote Counting Errors)
Notice how the child keeps track.	I- Lacks one-to-one I Can't keep track P- Inaccurate, loses track P Checks/rechecks A Accurate, with ease	I- Lacks one-to-one I Can't keep track P- Inaccurate, loses track P Checks/rechecks A Accurate, with ease	I- Lacks one-to-one I Can't keep track P- Inaccurate, loses track P Checks/rechecks A Accurate, with ease
Mark the child's reaction to the estimate made above.	X No estimate I No reaction P Reacts when counting A Makes new estimate	X No estimate I No reaction P Reacts when counting A Makes new estimate	X No estimate I No reaction P Reacts when counting A Makes new estimate
After the child has finished counting- Ask: "How many did you count?"	I No answer or is wrong P Recounts to find out A Tells how many	I No answer or is wrong P Recounts to find out A Tells how many	I No answer or is wrong P Recounts to find out A Tells how many

Task 2: Counting Out a Particular Quantity

Ask for a particular number of counters depending on the number the child was able to count in Task One. When counting is inaccurate, try another number until the child is accurate.

Say: "Now make a pile of _____ counters."	If the number was accurate to 20 or more, ask for 18	If the number was accurate to 12 or more, ask for 9	If the number was accurate to 7 or more, ask for 5
	I Counts past, doesn't notice P Counts past, but self corrects P+ Counts with effort A Counts accurately with ease	I Counts past, doesn't notice P Counts past, but self corrects P+ Counts with effort A Counts accurately with ease	I Counts past, doesn't notice P Counts past, but self corrects P+ Counts with effort A Counts accurately with ease

Summarizing Instructional Needs Record date and largest number counted to successfully, e.g. 18 – 12/22
Fill out only after completing entire assessment on both pages.

Task 1: Counting a Pile	To 7	To 12	To 21	To 32	Task 2: Counting Out a Quantity	To 5	To 9	To 18
Ready to Apply (A) Counts confidently and accurately					Ready to Apply (A) Counts with ease and accuracy			
Needs Practice (P) Loses track or checks and rechecks					Needs Practice (P) Counts past the number, but self corrects			
Needs Instruction (I) Has difficulty with one-to-one counting					Needs Instruction (I) Counts past the number			

Counting Objects

Child's Name: _____ Date: _____

Concept 1: Counting Objects

Student Interview

What You Need:

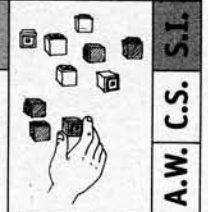
Counters (the number just used in Task 2, either 18, 9 or 5 counters).

Goal:

To determine if the child knows "one more" and "one less" for increasingly larger numbers.

Procedure:

Each procedure is described in greater detail at the beginning of each section below.



Task 3: One More/One Less

One More: Begin with the numbers of counters the child just counted in Task 2 (18, 9 or 5). Add 4 counters (*one at a time*), each time asking, "**How many now?**" Circle those numbers the child knows without counting. If the child needs to count, begin with a smaller number and repeat until determining which numbers *plus one* the child knows instantly.

Start with 18	Ask: "How many now?"	18 and 1 _____ 20 and 1 _____	19 and 1 _____ 21 and 1 _____	I- Guesses I Always counts	P Usually counts P+ Usually knows	A Knows without counting
...or 9	Ask: "How many now?"	9 and 1 _____ 11 and 1 _____	10 and 1 _____ 12 and 1 _____	I- Guesses I Always counts	P Usually counts P+ Usually knows	A Knows without counting
...or 5	Ask: "How many now?"	5 and 1 _____ 7 and 1 _____	6 and 1 _____ 8 and 1 _____	I- Guesses I Always counts	P Usually counts P+ Usually knows	A Knows without counting

One Less: Beginning with the number you determined the child can add one to without counting, take away 5 counters (*one at a time*), asking, "**How many now?**" If the child needs to count, begin with a smaller number and repeat until determining which numbers *minus one* the child knows instantly.

Start with 22	Ask: "How many now?"	22 less 1 _____ 19 less 1 _____	21 less 1 _____ 18 less 1 _____	20 less 1 _____	I- Guesses I Always counts	P Usually counts P+ Usually knows	A Knows without counting
...or 13	Ask: "How many now?"	13 less 1 _____ 10 less 1 _____	12 less 1 _____ 9 less 1 _____	11 less 1 _____	I- Guesses I Always counts	P Usually counts P+ Usually knows	A Knows without counting
...or 9	Ask: "How many now?"	9 less 1 _____ 7 less 1 _____	8 less 1 _____ 6 less 1 _____		I- Guesses I Always counts	P Usually counts P+ Usually knows	A Knows without counting

One More/One Less (not in sequence): Ask the following "What if" questions until the child needs to count or can't answer.

1 More	Ask: "What if we had _____ and we added 1 more?"	3 and 1 _____	6 and 1 _____	11 and 1 _____	17 and 1 _____
1 Less	Ask: "What if we had _____ and we took 1 away?"	5 less 1 _____	9 less 1 _____	13 less 1 _____	16 less 1 _____ 20 less 1 _____

Extension: If the child knows one more/one less not in sequence to 20, determine if the child knows this for larger numbers.

		Over the 10's			100 and Beyond		
1 More	Ask: "What if we had _____ and we added 1 more?"	29 and 1 _____	39 and 1 _____	59 and 1 _____	109 and 1 _____	199 and 1 _____	
1 Less	Ask: "What if we had _____ and we took 1 away?"	50 less 1 _____	80 less 1 _____		100 less 1 _____	110 less 1 _____	300 less 1 _____

Summarizing Instructional Needs

Using the information from above, mark the appropriate number.	One More (in sequence) FROM			One Less (in sequence) FROM			One More (not in sequence) FROM		One Less (not in sequence) FROM		Extension	
	5	9	18	9	13	22	Numbers to 18		Numbers to 20		Over the 10s	100 & Beyond
Ready to Apply (A) Knows without counting												
Needs Practice (P) Knows some												
Needs Instruction (I/I-) Always counts/guesses												

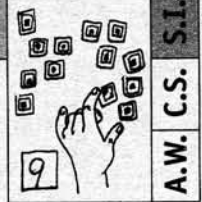
Changing Numbers

Child's Name: _____

Date: _____

Concept 2: Beginning Number Relationships

Student Interview



What You Need:

20 counters and the following numeral cards: 6, 10, 7, 9, 2, 5, 4, 13, 11 and 15 (BLM 2:3)

Goal:

To determine if the child knows if a number is larger or smaller than another number and can change one quantity into another.

Procedure:

The child makes a pile of counters when shown a series of numeral cards and adjusts the quantity to match the numerals. (The teacher names the numerals if necessary, circles known numerals and writes the incorrect response or a "?" if unknown.)

Working with Numbers to 10

Show the numeral **6** and say, "Can you tell me what this numeral (or number) is?" — Then say, "Can you make a pile of 6?"

Changing 6 to 10: Show the numeral **10**. Point to it and say, "What is this numeral?"

Ask:

"Can you change this pile so there are 10?"

After the child is finished ask, "What did you have to do? Did you have to get some more or take some away?"

"How many did you have to add (or take away)?"

Says:

Changes the Number

- I- Adds onto the original pile or guesses an amount to add
- I Makes new pile
- P- Counts original pile and then adds on counters by ones
- P Counts on by ones
- P+ Adds on a group, then checks
- A Adds on a group; tells how many added

Changing 10 to 7: Show the numeral **7**. Point to it and say, "What is this numeral?"

Ask:

"If you change this pile so there are 7, do you think you need to get some more or take some away?"

"Do you know how many you have to add (or take away)?"

Says:

Tells if More or Less is Needed

- I Doesn't say or is incorrect
- A Tells if more or less is needed
- A+ Tells (knows) ahead of time how many to add or take away

Say:

"Go ahead and change it."

After the child is finished ask, "What did you have to do? How many did you have to add (or take away)?"

Says:

Changes the Number

- I Makes new pile
- P- Counts from one and removes the extras
- P Takes away a group, then checks
- A Takes away a group; tells how many removed

Changing 7 to 9: Next show the numeral **9**, point to it and say, "What is this numeral?"

Ask:

"If you change this pile so there are 9, do you think you need to get some more or take some away?"

"Do you know how many you have to add (or take away)?"

Says:

Tells if More or Less is Needed

- I Doesn't say or is incorrect
- A Tells if more or less is needed
- A+ Tells (knows) ahead of time how many to add or take away

Say:

"Go ahead and change it."

After the child is finished ask, "What did you have to do? How many did you have to add (or take away)?"

Says:

Changes the Number

- I- Adds onto the original pile or guesses an amount to add
- I Makes new pile
- P- Counts original pile and then adds on counters by ones
- P Counts on by ones
- P+ Adds on a group, then checks
- A Adds on a group; tells how many added

Going Back, Numbers to 5: If the child had difficulty changing one number to another, continue with the following (use indicators as described above).

Going On, Numbers to 15: If the child was able to change the numbers with ease, continue with the following (use indicators as described above).

Show me 2	Change 2 to 5	Change 5 to 4	Change 9 to 13	Change 13 to 11	Change 11 to 15

Summarizing Instructional Needs

Tells if More or Less is Needed:	To 5	To 10	To 15	Changing Numbers:	To 5	To 10	To 15
Ready to Apply (A+) Knows ahead of time how many to add or take away				Ready to Apply (A) Adds on or removes a group, tells how many added or removed			
(A) Predicts need to add/take away				Needs Practice (P) Figures out number to add/remove			
Needs Instruction (I) Doesn't say or is incorrect				Needs Instruction (I) Unable to add on/remove from original pile			

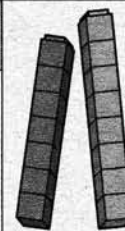
More/Less Trains

Child's Name: _____

Date: _____

Concept 3: Number Relationships

Student Interview



A.W. C.S. S.I.

What You Need:


Connecting cube trains in the following lengths and colors:
7 (brown), 8 (blue), 11 (yellow) and 9 (green)
One combination train: YYYrrrYYr (Y=yellow, r=red)
9 blue cubes & 12 yellow cubes (not connected)

Goal:

To determine if the child can use one train to figure out another and can compare trains and/or piles to find out how many more or less one quantity is than the other.

Procedure:

Follow the instructions provided below. Whenever there is a choice of questions, circle the question asked.

Show a Train of 7,  Ask, "How many cubes are in this brown train?"

Show the 7 & 8 Trains
(lined up, as shown)



Ask: "Now that you know how many in the brown train, can you tell me how many you think are in the blue train?"

Says:

I Counts all
A Counts on or adds on

Ask: "Which train has more? ...How many more?"
If unable to answer, ask: "How many extras?"

Says:

I- Unable to answer
I Says the number in the longer train
P Has to think about it or figure it out
A Knows without figuring it out

Show the 8 & 11 Trains
(lined up, as shown)



Ask: "Now that you know how many in the blue train, can you tell me how many you think are in the yellow train?"

Says:

I Counts all
A Counts on or adds on

Ask: "Which train has more? ...How many more?"
If unable to answer, ask: "How many extras?"

Says:

I- Unable to answer
I Says the number in the longer train
P Has to think about it or figure it out
A Knows without figuring it out

Show the 11 & 9 Trains
(lined up, as shown)



Ask: "How many do you think are in the green train?"

Says:

I Counts all
A Uses 1 train to figure out the other

Ask: "Which train has less? ...How many less?" If unable to answer, ask: "What would we have to do to make the yellow train the same as the green train?"

Says:

I- Unable to answer
I Says the number in the shorter train
P Figures out how many less
A Tells how many without figuring it out

Going On: If the child is able to tell how many more or less, ask the questions in the columns below.

Show the **Combination** Train: YYYrrrYYr



Ask: "How many yellow? ...How many red? Are there more yellow or red? ...How many more?"
If unable to answer, ask: "How many extras?"

Says:

I- Unable to answer
I Says the number in the larger group
P Figures it out
A Knows without figuring it out

Show:
A pile of 9 blue cubes
A pile of 12 yellow cubes
Have the child count each pile.

Ask: "Which pile has more? ...How many more?"
If unable to answer, ask: "How many extras? How did you find out?"

Says:

I- Unable to answer
I Says the number in the larger group
P Figures it out
A Knows without figuring it out

Going Back: If the child is unable to figure out the difference between piles of 9 and 12, change the pile of 12 to 6 and have the child compare 6 and 9.

Says:

I- Unable to answer
I Says the number in the larger group
P Figures it out
A Knows without figuring it out

Summarizing Instructional Needs

Using One Train to Determine Another				How Many More?					How Many Less?
	If More		If Less		Lined Up		Not Lined Up		Lined Up
	7 & 8	8 & 11	11 & 9		7 & 8	8 & 11	Comb. Train 6 & 4	Piles 9 & 12	Piles 6 & 9
Ready to Apply (A) Uses train in figuring out				Ready to Apply (A) Knows w/out figuring out					
Needs Instruction (I) Counts all				Needs Practice (P) Figures out					
				Needs Instruction (I) Unable to answer correctly					

Number Arrangements

Child's Name: _____ Date: _____

Concept 4: Identifying and Combining Parts of Numbers

Student Interview

What You Need:

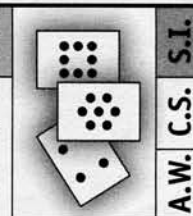
Dot Cards (BLM 4:3-4)



Goal:









To determine if the child can recognize parts of a number and combine these parts without having to count all.

Procedure:

Present dot cards as pictured below. Write the child's explanation and circle the appropriate indicator.



Identifying and Combining Parts			Identifying and Combining Parts		
Show Card 1 Ask: "How many dots? ...How did you find out?" 	Says:	I Counts all P- Identifies parts, but counts all P Identifies parts, but counts on A- Uses related combinations A Knows	Show Card 2 Ask: "How many dots? ...How did you find out?" 	Says:	I Counts all P- Identifies parts, but counts all P Identifies parts, but counts on A- Uses related combinations A Knows

Going Back: If the child <i>counts all</i> to determine the total, show the cards in the column below.				Going On: If the child <i>recognizes and combines parts</i> , show the cards in the column below.			
Recognition of Small Groups				Identifying and Combining Parts			
INDICATORS	I Counts all	P Combines groups of 2s and 3s	A Recognizes groups without counting	INDICATORS	I Counts all	P- Identifies parts, but counts all P Identifies parts and counts on	A- Use related combinations A Knows
	Ask: "How many dots?" 	Says:	I P A		Ask: "How many dots?" 	Says:	I P- P A- A
	Ask: "How many dots?" 	Says:	I P A		Ask: "How many dots?" 	Says:	I P- P A- A
	Ask: "How many dots?" 	Says:	I P A		Ask: "How many dots?" 	Says:	I P- P A- A
	Ask: "Can you find any groups that you know on this card?" 	Says:	I P A		Say: "See if you can find out how many dots without counting all of them." 	Says:	I P- P A- A

Summarizing Instructional Needs

Recognition of Small Groups	To 5	Identifying and Combining Parts	To 7	To 10
Ready to Apply (A) Recognizes small groups up to 5 without counting		Ready to Apply (A) Identifies and combines parts without counting		
Needs Practice (P) Quickly combines small groups (2s and 3s)		Needs Practice (P) Identifies parts and usually counts on (P-) Identifies parts, but usually counts all		
Needs Instruction (I) Counts for most small groups		Needs Instruction (I) Doesn't identify parts, counts all		

Combination Trains

Child's Name: _____ Date: _____

Concept 5: Number Combinations

Student Interview

What You Need:

Connecting cube trains (B=blue, y=yellow)

Nine Train: **BByyyBByy**

Seven Train: **BByBByy**

Thirteen Train: **BBByyyBBByyyy**

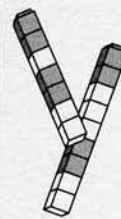
Sixteen Train: **BBByyyyBByyyyBBB**

Goal:

To determine what number combinations the child knows and to find out if they can use doubles plus one as a strategy for getting answers.

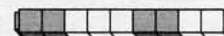
Procedure:

Present the various combination trains and ask the child the questions indicated below. Circle combinations the child knows instantly.



A.W. C.S. S.I.

Show the child the **Nine Train: BByyyBByy** ($B=2+2$) ($y=3+2$)



NINE TRAIN	Ask: "How many blue?" (2+2)			Ask: "How many yellow?" (3+2)			Say: "So there are 4 and 5, how many is that all together? ...How did you figure it out?"		
	I Counts all	P- Identifies parts, but counts all	A- Use related combinations	I Counts all	P- Identifies parts, but counts all	A- Use related combinations	I Counts all	P- Identifies parts, but counts all	A- Use related combinations
		P Identifies parts and counts on	A Knows, combines parts instantly		P Identifies parts and counts on	A Knows, combines parts instantly		P Identifies parts and counts on	A Knows, combines parts instantly
	Child's Explanation:			Child's Explanation:			Child's Explanation:		

Going Back: Seven Train

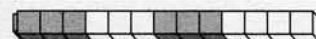
If the child knew 4+5 instantly, skip to Thirteen Train (below).

Otherwise, present the Seven Train (as shown): **BByBByy** ($B=2+2$) ($y=1+2$)



SEVEN TRAIN	Ask: "How many blue?" (2+2)			Ask: "How many yellow?" (1+2)			Say: "So there are 4 and 3, how many is that all together? ...How did you figure it out?"		
	I Counts all	P- Identifies parts, but counts all	A- Use related combinations	I Counts all	P- Identifies parts, but counts all	A- Use related combinations	I Counts all	P- Identifies parts, but counts all	A- Use related combinations
		P Identifies parts and counts on	A Knows, combines parts instantly		P Identifies parts and counts on	A Knows, combines parts instantly		P Identifies parts and counts on	A Knows, combines parts instantly
	Child's Explanation:			Child's Explanation:			Child's Explanation:		

Going On: Thirteen Train BBByyyBBByyyy



THIRTEEN	Ask: "How many blue?" (3+3)			Ask: "How many yellow?" (3+4)			Say: "So there are 6 and 7, how many is that all together? ...How did you figure it out?"		
	I	P	A	I	P	A	I	P	A
	Explanation:			Explanation:			Explanation:		

Sixteen Train:

If the child knew 3+3 without counting at all,

present the Sixteen Train (as shown): **BBByyyyBBByyyyBBB** ($B=3+2+3$) ($y=4+4$)



SIXTEEN	Ask: "How many yellow?" (4+4)			Ask: "How many blue?" (3+2+3)			Say: "So there are 8 and 8, how many is that all together? ...How did you figure it out?"		
	I	P	A	I	P	A	I	P	A
	Explanation:			Explanation:			Explanation:		

Summarizing Instructional Needs

(Circle if knows instantly)

	Sums to 6		Sums to 9		Sums to 20		
	Doubles 2+2, 3+3	Doubles ± 1 3+2, 1+2	Doubles 4+4	Doubles ± 1 4+5, 3+4, 4+3	Doubles 8+8	3 Digits 3+2+3	Doubles ± 1 6+7
Ready to Apply (A) Combines parts without counting							
Needs Practice (P) Describes parts, but usually counts on							
Needs Instruction (I) Counts all							

Hiding Assessment

Child's Name: _____ Date: _____

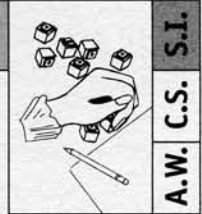
Concept 6: Decomposition of Numbers to Ten

Student Interview

What You Need:
10 identical counters

Goal:
Find out which number combinations the child knows by determining if they can tell the missing part of a number without having to figure it out.

Procedure:
Have the child hand you a particular number of counters. Record the number in the column. Hide some and show the rest. Ask the child how many are hidden and record the response.



Part 1: Hiding Objects	Number Selected: <input type="text"/>		
Place the counters on the table and hide them under your hand.	Show	Says	Comments
Pull out and show 2 of the counters. Ask: "How many are hiding?" Record the number the child says.	2		
Put all the counters under your hand, then remove and show 4. Ask: "Now, how many are hiding?"	4		
Remove and show 1. Ask: "How many are hiding?"	1		
Remove and show 3. Ask: "How many are hiding?"	3		
Continue the process with all the remaining combinations for this number. Always asking: "How many are hiding?"			

Extension: Check larger or smaller numbers until you determine what number combinations the child knows quickly and easily and which number combinations the child is figuring out. Write in and check the rest of the combinations for each number assessed.

Number Selected: <input type="text"/>			Number Selected: <input type="text"/>			Number Selected: <input type="text"/>		
Show	Says	Comments	Show	Says	Comments	Show	Says	Comments
2			2			2		
4			4			4		
1			1			1		
3			3			3		

Summarizing Instructional Needs Determine the number(s) the child knows and proceed to Part 2 (see page two)

Needs Prerequisite (X)	Needs Instruction (I)	Needs Practice	Ready to Apply (A)
Guesses or unable to figure out	Figures out most with difficulty, gets some wrong	(P-) Figures out most with ease, usually right (P) Knows most, figures out rest with ease	Knows all quickly and confidently

Using the indicators above, mark what numbers the child knows or needs to practice. Let the date serve as the marker.

3				4				5				6				7				8				9				10			
X	I	P	A	X	I	P	A	X	I	P	A	X	I	P	A	X	I	P	A	X	I	P	A	X	I	P	A	X	I	P	A

Hiding Assessment

Child's Name: _____ Date: _____

Concept 6: Decomposition of Numbers to Ten

Student Interview



What You Need:
No materials needed.

Goal:
To determine the child's ability to identify missing parts of numbers mentally.

Procedure:
After you have determined which number(s) the child knows, ask the following 'What If' questions. Stop the assessment at the point the child is unable to tell the missing numbers instantly.

Part 2: "What if..."

Select the appropriate range of numbers and ask the "What if..." questions as directed.

Ranges: Up to 4			Ranges: Up to 5			Ranges: Up to 6		
Say: "What if <i>you had</i> __ cubes and and you <i>gave me</i> __? How many would be left?" "What if...?"			Say: "What if <i>you had</i> __ cubes and and you <i>gave me</i> __? How many would be left?" "What if...?"			Say: "What if <i>you had</i> __ cubes and and you <i>gave me</i> __? How many would be left?" "What if...?"		
you had...	and gave me...	Says:	you had...	and gave me...	Says:	you had...	and gave me...	Says:
4	2		5	2		6	2	
4	1		5	1		6	1	
4	3		5	3		6	3	
3	1		3	2		4	1	
3	3		4	1		5	2	

Ranges: Up to 7			Ranges: Up to 8			Ranges: Up to 9			Ranges: Up to 10		
Say: "What if <i>you had</i> __ cubes and and you <i>gave me</i> __? How many would be left?" "What if...?"			Say: "What if <i>you had</i> __ cubes and and you <i>gave me</i> __? How many would be left?" "What if...?"			Say: "What if <i>you had</i> __ cubes and and you <i>gave me</i> __? How many would be left?" "What if...?"			Say: "What if <i>you had</i> __ cubes and and you <i>gave me</i> __? How many would be left?" "What if...?"		
you had...	and gave me...	Says:	you had...	and gave me...	Says:	you had...	and gave me...	Says:	you had...	and gave me...	Says:
7	2		8	2		9	2		10	2	
7	1		8	1		9	1		10	1	
7	3		8	5		9	4		10	6	
6	4		7	4		9	6		10	3	
5	1		6	2		7	2		8	2	
6	3		7	5		8	3		7	4	

Summarizing Instructional Needs

Needs Practice (P) Knows most, figures out rest with ease	Ready to Apply (A) Knows all quickly and confidently
--	---

Using the indicators above, mark what range of numbers the child knows or needs to practice.

	Up to 4	Up to 5	Up to 6	Up to 7	Up to 8	Up to 9	Up to 10
Ready to Apply (A)							
Needs Practice (P)							

Concept 7: One Ten and Some More

Student Interview

What You Need:

Ten frames with 9, 8, 7, & 10 stars (BLM 7:5-6)

Goal:

Part One: To determine if the child can combine numbers by making a ten and leftovers.

Procedure:

Present ten frames as pictured below. Write the child's explanation and circle the appropriate indicators. Also circle the description of the strategy used when appropriate.



S.I.
C.S.
A.W.

Part 1: Addition Using Ten Frames

The first question is a practice question intended to ensure the child understands what is being asked.

<p>Show</p> <p>Ask: "How many?"</p>	<p>"If we added 2 more stars, would there be enough to make a ten and leftovers?"</p> <p>"How many would you need to make a ten?" _____</p> <p>"How many leftovers would there be?" _____</p> <p>"How many would that be all together?" _____</p>
<p>Show</p> <p>Ask: "How many?"</p>	<p>"If we added 6 more stars, would there be enough to make a ten and leftovers?"</p> <p>"How many would you need to make a ten?" _____</p> <p>"How many leftovers would there be?" _____</p> <p>"How many would that be all together?" _____</p> <p>"How did you figure it out?" _____</p>
<p>Says:</p>	
<p>I- Counts all P Figures out tens and leftovers (knows total)</p> <p>I Counts on A Uses known combinations and relationships, explains</p>	
<p>Show</p> <p>Ask: "How many?"</p>	<p>"If we added 5 more stars, would there be enough to make a ten and leftovers?"</p> <p>"How many would you need to make a ten?" _____</p> <p>"How many leftovers would there be?" _____</p> <p>"How many would that be all together?" _____</p> <p>"How did you figure it out?" _____</p>
<p>Says:</p>	
<p>I- Counts all P Figures out tens and leftovers (knows total)</p> <p>I Counts on A Uses known combinations and relationships, explains</p>	

Choose the appropriate column below.

<p>Going Back: If the child counted all or counted on, ask the following questions.</p>		<p>Going On: If the child was able to form tens and leftovers, ask the following questions.</p>	
<p>Show</p> <p>Ask: "How many?"</p>	<p>Show</p> <p>Ask: "How many?"</p>	<p>Cover the ten frames and ask: "What if we had 8 stars on a ten frame and we added 7 more? How many would you have all together?" _____</p> <p>"How did you figure it out?" _____</p>	
<p>Show both and ask: "If you put these together how many would you have?" _____ "How did you figure it out?" _____</p>		<p>Says:</p> <p>I- Counts all P Figures out tens and leftovers (knows total)</p> <p>I Counts on A Uses known combinations and relationships, explains</p>	
<p>Says:</p> <p>I Counts all</p> <p>P Counts on</p> <p>A Knows</p>		<p>EXTENSION: If the child was able to add with ease ask: "What if we had 18 and we added 7 more? How many would you have all together?" _____</p> <p>"How did you figure it out?" _____</p>	
<p>Cover the ten frames and ask: "What if we had 6 and 10? How many would you have?" _____ "How did you figure it out?" _____</p>		<p>Says:</p> <p>I- Counts all P Figures out tens and leftovers (knows total)</p> <p>I Counts on A Uses known combinations and relationships, explains</p>	
<p>Says:</p> <p>I Counts all</p> <p>P Counts on</p> <p>A Knows</p>			

Summarizing Instructional Needs

Going Back (combining one ten and some more)	Model 10+8	What If 6+10	Adds (by forming one ten and leftovers)	Model 8+6	Model 7+5	Going On	
						What If 8+7	What If 18+7
Ready to Apply (A) Knows 10 + a number			Ready to Apply (A) Forms tens, leftovers using known combinations				
Needs Practice (P) Counts on			Needs Practice (P) Figures out ten, leftovers; knows total				
Needs Instruction (I) Counts all			Needs Instruction (I) Counts all/counts on				

Ten Frames

Child's Name: _____ Date: _____

Concept 7: One Ten and Some More

Student Interview

What You Need:

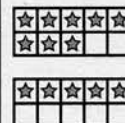
Ten frames with 10, 5, 4 & 7 stars (BLM 7:5-6)

Goal:

Part Two: To determine if the child can subtract using known combinations and relationships.

Procedure:

Present ten frames as pictured below. Write the child's explanation and circle the appropriate indicators. Also circle the description of the strategy used when appropriate.



S.I.
C.S.
A.W.

Part 2: Subtraction Using Ten Frames

Show



Ask: "How many?"

Show



Ask: "How many?"

"How many is that all together?" _____

"How many would be left if we took 7 away?" _____

"How did you figure it out?"

(Takes 7 off the 10 and adds 3 to 5)
(Breaks up 7 into 5 and 2)

Says:

I- Counts all

I Counts back or counts up

P Figures out combinations and relationships

A Uses known combinations and relationships, explains

Show



Ask: "How many?"

Show



Ask: "How many?"

"How many is that all together?" _____

"How many would be left if we took 9 away?" _____

"How did you figure it out?"

(Takes 9 off the 10 and adds 1 to 4)
(Breaks up 9 into 4 and 5)

Says:

I- Counts all

I Counts back or counts up

P Figures out combinations and relationships

A Uses known combinations and relationships, explains

Choose the appropriate column below.

Going Back: If the child counted all or counted on, ask the questions below.

Show



Ask: "How many?"

Show



Ask: "How many?"

"How many is that all together?"

"What if we took 7 away? How many would be left?" _____ "How did you figure it out?"

Says:

I Counts all

P Counts back or up

A Knows

Cover the ten frames and ask: "What if we had 14 and we took away 10? How did you figure it out?"

Says:

I Counts all

P Counts back or up

A Knows

Going On: If the child was able to subtract with ease, ask the questions below until the child has difficulty.

Cover the ten frames and ask: "What if we 13 stars on ten frames and we took 6 away? How many would be left?" _____ "How did you figure it out?"

Says:

I- Counts all

I Counts back or counts up

P Figures out combinations and relationships

A Uses known combinations and relationships, explains

(Takes 6 off the 10 and adds 4 to 3)
(Breaks up 6 into 3 and 3)

EXTENSION: Ask: "What if we had 23 and took 6 away? How many would be left?" _____ "How did you figure it out?"

Says:

I- Counts all

I Counts back or counts up

P Figures out combinations and relationships

A Uses known combinations and relationships, explains

(Takes 6 off the 10 and adds 13 to 4)
(Breaks up 6 into 3 and 3)
(Adds 10 to previous answer)

Summarizing Instructional Needs

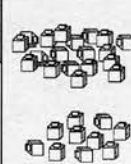
Subtracts (breaks number into one ten and some more)	Going Back		Subtracts (when breaking up a ten)	Model 15-7	Model 14-9	Going On	
	Model 17-7	What If 14-10				What If 13-6	What If 23-6
Ready to Apply (A) Knows 10 + a number			Ready to Apply (A) Forms tens, leftovers using known combinations				
Needs Practice (P) Counts back or up			Needs Practice (P) Figures out ten, leftovers; knows total				
Needs Instruction (I) Counts all			Needs Instruction (I) Counts all/counts back or up				

► Grouping Tens

Child's Name: _____ Date: _____

Concept 8: Numbers as Tens and Ones

Student Interview



A.W. C.S. S.I.

What You Need:

34 connecting cubes, all one color

Goal:

To determine if the child can tell "how many" in a quantity if the number of tens and ones is known, and to determine if the child can add ten and take away ten without counting.

Procedure:

Present the child with 34 connecting cubes. Ask the questions below and circle the indicators for each question.

Part 1: Organizing Into Tens and Ones

Present the child with 34 connecting cubes.

Ask: "How many do you think there might be?"

_____ Doesn't estimate Estimates: _____

Ask: "How many groups of tens do you think you can make?"

Says:

Number of Tens in a Number

- I Tens and ones not related to the estimate
- A Tells correct number of tens

Say: "Check and see how many tens you can make." (piles, not trains)

While the child is counting out tens, notice and mark the child's reaction and/or new estimate.

Reaction to Estimate

- I No reaction
- P Reacts, no new estimate
- A Spontaneously makes new estimate

After the child has made all the tens possible, ask: "How many groups of tens did you make?" _____
"How many leftovers?" _____

Ask: "Does this give you an idea of how many there are?"
If necessary, ask: "Can you find out?"

Says:

Determines Quantity

- I Counts all by ones
- P Counts by tens and then by ones
- A Knows the total quantity without needing to count

If the child counted all by ones, ask the following question and then use the **Going Back** column.

If the child counted by tens or knew the quantity without counting, ask the following question and use the **Going On** column.

Push the counters back into a pile and ask: "Now, how many are there?" — "How do you know?"

Says:

GOING BACK

GOING ON

Remove some cubes, leaving a pile of 17.
Ask the child to find out, "How many are in this pile?"
Ask: "How many trains of ten do you think you can make?"
"Go ahead and make a train."

Says:

"How many will there be if we add 10 more?"

Says:

Plus 10

- I Guesses or gets wrong answer
- P Figures out
- A Knows without counting

As the child begins to make a train of ten, ask: "How many leftovers do you think there will be?"

Says:

One, Ten and Leftovers

- I Guesses or gets wrong answer
- P Figures out accurately
- A- Knows, but checks
- A Knows without counting

"What if we take ten away?" Refocus on 34 if necessary.

Says:

Minus 10

- I Guesses or gets wrong answer
- P Figures out
- A Knows without counting

Put back the cubes previously removed. If necessary, remind the child that there are 34 and go on to page 2.

If the child adds and subtracts 10 without counting, ask the **EXTENSION** questions. (If the child counted to get the answers, skip these questions and go on to pg. 2.)

Extension: Use the indicators as above.

Ask: "What if we..."	Says:	I	P	A	Ask: "What if we..."	Says:	I	P	A
added 20 more?"					had 7 tens and we added 12 more?"				
took 20 away?"									

Summarizing Instructional Needs

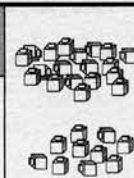
Going Back: One Ten & Leftovers	Number of Tens	Determines Quantity	Going On	+10	-10
Knows without counting (A)	Tell the number of tens (A)	Knows without counting (A)	Knows without counting (A)		
Knows, but checks (A-)					
Figures out accurately (P)	Unable to tell the number of tens (I)	Counts by tens (P)	Figures out (P)		
Guesses or gets wrong answer (I)		Counts by ones (I)	Guesses/gets wrong answer (I)		
Extension	+20			-20	
	I	P	A	I	P
			7 Tens +12		
			I	P	A

► Grouping Tens

Child's Name: _____ Date: _____

Concept 8: Numbers as Tens and Ones

Student Interview



A.W. C.S. S.I.

What You Need:

34 connecting cubes, all one color

Goal:

To determine if the child knows that the total number does not change when counted in a different way and if the child understands what it means to count by 2s and 5s and to find out how well they can do this.

Procedure:

Ask the questions below and circle the indicators for each question.

Part 2: Conservation and Counting by Groups

Present the child with 34 connecting cubes all in one pile.

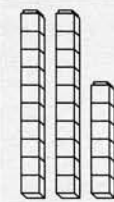
Ask: "If we counted these by 5s, how many would there be?"	Says:	Conservation (when counting by 5s)
		I Says a different number P Ignores leftovers or restricts answer to a number that can be reached by counting by 5s A Says the correct number
Ask: "Would you check and see?"	Says:	Counting by 5s
		I- Counts each cube as 5, rote counting sequence inaccurate I Counts each cube as 5, rote counting sequence accurate P Counts by groups of 5, rote counting sequence inaccurate P+ Counts by groups of 5, rote counting sequence accurate, but difficult A Counts by groups of 5, accurately and easily
Ask: "If we counted these by 2s, how many would there be?"	Says:	Conservation (when counting by 2s)
		I Says a different number P If using an odd number of cubes, restricts answer to a number that can be reached by counting by 2s A Says the correct number
Ask: "Would you check and see?"	Says:	Conservation (when counting by 2s)
		I- Counts each cube as 2, rote counting sequence inaccurate I Counts each cube as 2, rote counting sequence accurate P Counts by groups of 2, rote counting sequence inaccurate P+ Counts by groups of 2, rote counting sequence accurate, but difficult A Counts by groups of 2, accurately and easily

Summarizing Instructional Needs

Counting by 5s		Counting by 2s	
Conservation	Counting by Groups	Conservation	Counting by Groups
Says the correct number (A)	Counts by groups with ease and accuracy (A)	Says the correct number (A)	Counts by groups with ease and accuracy (A)
Ignores leftovers or restricts answer to a number that can be reached by counting by 5s (P)	Counts by groups, but rote sequence difficult (P)	If using an odd number of cubes, restricts answer to a number that can be reached by counting by 2s (P)	Counts by groups, but rote sequence difficult (P)
Guesses a different number (I)	Moves one at a time, but counts by groups (I)	Guesses a different number (I)	Moves one at a time, but counts by groups (I)

Concept 9: Combining and Separating Tens and Ones

Student Interview



S.I.
C.S.
A.W.

What You Need:

Connecting cubes: 1 train of 6,
3 trains of 10, 10 loose cubes
Addition Card (28+24)
Paper/Pencil

Goal:

To determine if the child can combine two-digit numbers by mentally breaking numbers apart and reorganizing them into tens and leftovers, and to determine how the child solves problems presented symbolically.

Procedure:

Present connecting cube trains and ask the child to tell what would happen if particular numbers were added to the trains. Then present a written problem for the child to solve.

Part 1: Adding Up Tens

Present the child with connecting cube trains: 2 trains of 10 and 1 train of 6.

Point at one of the tens and ask: **"If there are ten cubes in this train, how many cubes in all?"** _____

NOTE: The following questions are "What if?" questions. The children may need to touch the model, but ask them to try to figure the answer out without adding cubes or breaking the trains apart. When a choice is presented with a slash (/), circle one, i.e. "Correct/Incorrect."

Ask: **"How many would there be if we added 9 more? ...How did you figure that out?"**

Uses model/does mentally
Says:

Adding 9 Correct/Incorrect

- I** Counts all/counts on
- P** Breaks it up
- A** Relates to 10

Refocus on the 26 and ask: **"If we added 16 more, how many would we have all together? ...How did you figure that out?"**

Uses model/does mentally
Says:

Adding With Regrouping Correct/Incorrect

- I** Counts all/counts on without regard to tens and ones
- P** Figures out tens and/or leftovers
- A** Makes tens and leftovers using known combinations

Choose the appropriate column below. When completed, go on to the section labeled "Using Symbols."

Going Back: If the child counts to figure the answers out, ask the following.

Going On: If the child is able to figure the answers out without counting, do the following:

Add one more train of 10 and have the child tell how many.

Add one more train of 10 and have the child tell how many.

Ask: **"How many would there be if we added 20 to this 36? ...How did you figure that out?"**

Uses model/does mentally
Says:

- I** Counts by ones
- P** Counts by tens
- A** Adds tens with ease

Then write +25 and ask: **"If we added 25 more to this 36, how many would that be all together? ...How did you figure that out?"**

Ask: **"How many would there be if we added 12 more? ...How did you figure that out?"**

Uses model/does mentally
Says:

- I** Counts all/counts on
- P** Breaks 12 up without regard to tens and ones
- A** Breaks 12 into 10 and 2

Uses model/does mentally
Says:

- I** Counts all/counts on without regard to tens and ones
- P** Figures out tens and/or leftovers
- A** Makes tens and leftovers using known combinations

Using Symbols

Solves Using Relationships Correct/Incorrect

Solves Using Procedure Correct/Incorrect

Remove the models and present the addition card: **28+24**
Ask: **"Can you find the answer to this problem and then tell me how you did it?"**

Says:

(If the children solve the problem by using a procedure, have them show how they got the answer with the cubes.)

- I** Counts all/counts on without regard to tens and ones
- P** Figures out tens and/or leftovers
- A** Makes tens and leftovers using known combinations

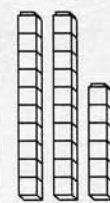
- I** Incorrect procedure
- P** Correct, but can't explain or show with model
- A** Correct, explains and can show with model

Summarizing Instructional Needs

Part One: Adding Up Tens Indicate Correct (C) or Incorrect (I)	With Model (circle if does mentally)					Relationships/Procedures Use Above Indicators	
	26+9	26+16	Going Back 36+20	Going Back 36+12	Going On 36+25	Written 28+24	
Ready to Apply (A) Organizes into tens and ones/uses known combinations						A	
Needs Practice (P) Combines by making tens and leftovers by figuring out						P	
Needs Instruction (I) Counts all or counts on without regard to tens and ones						I	

Concept 9: Combining and Separating Tens and Ones

Student Interview



S.I.
C.S.
A.W.

What You Need:

Connecting cubes: 1 train of 6,
3 trains of 10, 10 loose cubes
Subtraction Card (34-16)
Paper/Pencil

Goal:

To determine if the child can subtract from two-digit numbers by mentally breaking numbers apart and reorganizing them into tens and leftovers, and to determine how the child solves problems presented symbolically.

Procedure:

Present connecting cube trains and ask the child to tell what would happen if particular numbers were taken away from the trains. Then present a written problem for the child to solve.

Part 2: Breaking Up Tens

Present the child with connecting cube trains: 3 trains of 10 and 1 train of 6 and make sure he or she knows how many all together.

NOTE: The following questions are "What if?" questions. The children may need to touch the model, but ask them to try to figure the answer out without removing cubes or breaking the trains apart. When a choice is presented with a slash (/), circle one, i.e. "Correct/Incorrect."

Ask: "How many would there be if we took 9 away? ...How did you figure that out?"

Uses model/does mentally
Says:

Subtracting 9 Correct/Incorrect

- I** Counts all/counts up or back
P Breaks it up
A Relates to 10

Refocus on the 36 and ask: "How many would there be if we took 17 away? ...How did you figure that out?"

Uses model/does mentally
Says:

Subtracting With Regrouping Correct/Incorrect

- I** Counts without regard to tens
P Uses relationships that are inefficient or not related to tens and ones
A Uses knowledge of tens and ones or efficient relationships

Say: "We need 32 cubes. What do you have to do to make 32? ...Go ahead and take 4 away."

Focus on the remaining 32 and ask: "If we took 14 away from this 32, how many would be left? ...How did you figure that out?"

Uses model/does mentally
Says:

Subtracting With Regrouping Correct/Incorrect

- I** Counts without regard to tens
P Uses relationships that are inefficient or not related to tens and ones
A Uses knowledge of tens and ones or efficient relationships

Choose the appropriate column below. When completed, go on to the section labeled "Using Symbols."

Going Back: If the child counts to figure the answers out, ask the following.
Ask: "What if we had this 32 and we took 12 away, how many would that be? ...How did you figure that out?"

Going On: If the child does not count to figure the answers out, ask: "What if we had this 32 and we took 23 away? (write -23 as a reminder) ...How did you figure that out?"

Uses model/does mentally
Says:

Subtracting 12 Correct/Incorrect

- I** Counts up or back without regard to tens
P Uses relationships not related to tens and ones
A Uses knowledge of tens and ones

Uses model/does mentally
Says:

Subtracting With Regrouping Correct/Incorrect

- I** Counts without regard to tens
P Uses relationships that are inefficient or not related to tens and ones
A Uses knowledge of tens and ones or efficient relationships

Using Symbols

Remove the models and present the subtraction card: **34-16**
Ask: "Can you find the answer to this problem and then tell me how you did it?"
(If the children solve the problem by using a procedure, have them show how they got the answer with the cubes.)

Says:

Solves Using Relationships Correct/Incorrect

- I** Counts without regard to tens
P Uses relationships that are inefficient or not related to tens and ones
A Uses knowledge of tens and ones or efficient relationships

Solves Using Procedure Correct/Incorrect

- I** Incorrect procedure
P Correct, but can't explain or show with model
A Correct, explains and can show with model

Summarizing Instructional Needs

Part Two: Breaking Up Tens Indicate Correct (C) or Incorrect (I)	With Model (circle if does mentally)					Relationships/Procedures Use Above Indicators	
	36-9	36-17	32-14	Going Back 32-12	Going On 32-23	Written 34-16	
Ready to Apply (A) Uses knowledge of tens and ones or efficient relationships						A	
Needs Practice (P) Uses relationships that are inefficient or not related to tens and ones						P	
Needs Instruction (I) Counts without regard to tens						I	